

PATENT SPECIFICATION

DRAWINGS ATTACHED

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COMPLETE SPECIFICATION

Post-Surgical Irrigation Appliance

We, HOLLISTER INCORPORATED, a Corporation organized under the laws of the State of Illinois, United States of America, of 211 East Chicago Avenue, Chicago, State of Illinois, United States of America, do hereby declare the invention, for which we pray that a Patent may be granted to us, and the method by which it is to be performed, to be particularly described in and by the following statement:—

This invention relates to post-surgical irrigation appliances.

It is the primary object of our invention to provide a new and improved post-surgical irrigating appliance having an improved sealing means for a catheter opening.

It is another object of our invention to provide a new and improved post-surgical irrigating appliance having means for sealing the catheter opening, which means improves as regards its sealing properties on contact with the fluids expelled from the patient.

It is yet a further object of this invention to provide a new and improved post-surgical irrigation appliance having means for sealing the opening through which the catheter is inserted, which means is effective during positioning of the catheter in the opening and remains effective after the catheter is withdrawn to completely seal the catheter opening.

The present invention provides a post-surgical irrigating appliance comprising a sheet-like bag of waterproof material and means for holding the bag in position on a patient, said bag having an open end which constitutes the lower end of the bag when the appliance is operatively attached to a patient, a back wall in which is a stoma opening for securing the bag around the stoma of the patient, a front wall in which is a catheter opening in alignment with the stoma

opening in the back wall and of sufficient size for receiving a catheter to be inserted through the front wall and into the stoma of the patient for irrigation purposes, and sealing means associated with the catheter opening, said sealing means comprising a material which expands greatly when subjected to moisture so that, on insertion of a catheter through the catheter opening and the sealing means and on contact of irrigation fluid with the sealing means, the sealing means will expand greatly into sealing engagement with the catheter and, after the catheter is removed, the sealing means will expand further to close the catheter opening to provide a continuous seal against drainage and fecal discharge through the catheter opening.

The invention will be more readily understood from the following detailed description taken in connection with the accompanying drawing which illustrates one embodiment of the invention, which embodiment is to be considered only as an exemplification of the principles of the invention and is not intended to be limitative. In the drawing,

Figure 1 is a fragmentary view of the abdominal section of a human torso showing a post-surgical irrigating appliance in use;

Figure 2 is an enlarged fragmentary view of the irrigating appliance shown in Figure 1;

Figure 3 is an enlarged fragmentary horizontal section view taken along the line 3-3 of Figure 1; and

Figure 4 is an enlarged fragmentary vertical section view taken along the line 4-4 of Figure 1.

Referring now to the drawing, Figure 1 illustrates a post-surgical irrigation appliance 10 secured to the torso 11 by means of a belt 12. As further illustrated in Figures 2, 3 and 4, the irrigation appliance is pro-

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vided with a backing member 14 and may, in selected cases, be sealed to the torso with the aid of a medicinal sealing pad or gasket 15. A catheter tube 16 may be inserted in the wall of the appliance for irrigating purposes. The catheter is connected to a source of water such as an enema bag (not shown).

The irrigation appliance comprises a bag 10 having front and back panels 18 and 19, respectively, which are sealed about the sides at 20a and 20b, and at the top at 20c. The bottom 20d of the bag is open so that, when the user is positioned over a toilet, fecal discharge, which has flowed in response to the irrigation fluids fed through the catheter, may pass through the open end of the bag and drop into the toilet.

The bag preferably is made of a sheet-like waterproof plastics material. It is provided with a centrally disposed stoma opening in the back panel near the top of the appliance for receiving the stoma 22 of the patient. Opposite the stoma opening there is provided, in the front panel, a catheter opening 23 through which the catheter may be inserted into the stoma.

The inside of the front panel around the catheter opening is provided with the sealing means 24 of this invention. The sealing means 24 comprises a compressed sponge-like material 25, for example a cellulose material commercially known as "super cell", which is heat sealed to the inside of the front panel adjacent the catheter opening. The nature of the sponge is such that when dry it is extremely thin, but when exposed to moisture it expands greatly as the moisture is absorbed. The sponge is provided with a normally closed catheter passage comprising, for example, cross-like slits 26 which are in registry with the catheter opening and which will yield in response to the thrust of the catheter there-through, as shown in Figure 3.

A catheter for use with the appliance of the present invention may be provided with a hard plastics sleeve 27 having an enlarged disc-like radially projecting flange 27a at one end thereof. The sleeve fits snugly about the periphery of the catheter so as to be adjustably slidable longitudinally of the catheter and to be substantially self-locking in any position of adjustment. The distal end of the catheter is inserted into the stoma a suitable length, such as six to twelve inches in the case of insertion into a large intestine. Once the selected distance of insertion has been reached, the sleeve is moved along the length of the catheter to a position abutting the front panel adjacent the sealing means to provide a rigid backing therefor as well as an additional sealing structure which hugs the periphery of the catheter. The sponge-like sealing means

itself affords a suitable sealing structure by itself but the combination of the sponge and the sleeve on the catheter, when the catheter is inserted through the sponge, ensures against back flow of even the most minute amount of water. This is extremely desirable since an important object in irrigating is to get as much water as possible in the bowels and to hold it there as long as possible to break up the fecal matter.

When the catheter has been inserted through the sponge-like sealing means and irrigation begins, moisture will contact the sponge, causing the sponge to expand greatly in depth and to hug tightly the periphery of the catheter to create a seal therearound for preventing back flow of irrigation fluid through the catheter opening. When a sufficient quantity of fluid has been supplied by means of the irrigation, the catheter is removed so that discharge from the patient may begin. Drainage fluid from the patient will come in contact with the sponge which will further expand. As shown in Figure 4, after the catheter has been removed, the slits in the wetted and greatly expanded sponge are sealed to close the catheter opening. Thus, back flow of irrigation water as well as fecal discharge or other drainage is sealed against, and there is left only one avenue for disposal of such material, i.e. through the open bottom of the bag and into a toilet.

Backing member 14 is provided with an opening 28 having an inwardly directed smooth flanged surface 28a for loosely embracing the stoma in a non-irritating fashion. The outer portion of backing member 14 is provided with two laterally projecting ears 30 and 32 each having an opening 34 and 36, respectively, in the end thereof. Each opening 34 and 36 is provided with an enlarged diameter portion 34a and 36a, respectively, and a reduced diameter portion 34b and 36b, respectively. The belt 12 is provided with two generally flat end portions 38 and 40 each having a post 42 and 44, respectively, projecting outwardly from one face thereof. Each post is provided with a reduced neck portion 42a and 44a, respectively, so that the posts may be inserted through the enlarged portions of the openings in the ears and then, as the belt moves laterally, the reduced neck portions may be caught in the smaller diameter portions of the ear openings to fasten the bag to the belt and secure the same to the patient.

The irrigation bag of this invention provides a new and improved sealing structure preventing back flow of irrigating fluid as well as fecal discharge through the catheter opening so that such material will be properly drained through the bottom of the bag into an appropriate receptacle. The sealing structure is such that it not only

effectively seals while the catheter is in position, but closes off the catheter opening in the bag as well as the opening in the seal itself once the catheter has been withdrawn.

- 5 Since the sealing structure preferably comprises a thin disc of sponge material, it is extremely inexpensive and can be formed with the bag by heat sealing during manufacture of the bag, rendering the complete
10 structure so inexpensive that it can be disposed off after a single use, promoting economy as well as sanitation.

WHAT WE CLAIM IS:—

1. A post-surgical irrigating appliance
15 comprising a sheet-like bag of waterproof material and means for holding the bag in position on a patient, said bag having an open end which constitutes the lower end of the bag when the appliance is operatively
20 attached to a patient, a back wall in which is a stoma opening for securing the bag around the stoma of the patient, a front wall in which is a catheter opening in alignment with the stoma opening in the back
25 wall and of sufficient size for receiving a catheter to be inserted through the front wall and into the stoma of the patient for irrigation purposes, and sealing means associated with the catheter opening, said sealing
30 means comprising a material which expands greatly when subjected to moisture so that, on insertion of a catheter through the catheter opening and the sealing means and

on contact of irrigation fluid with the sealing means, the sealing means will expand 35 greatly into sealing engagement with the catheter and, after the catheter is removed, the sealing means will expand further to close the catheter opening to provide a continuous seal against drainage and fecal discharge 40 through the catheter opening.

2. The appliance according to claim 1, wherein the sealing means is positioned on the inner face of the front wall of the bag 45 around the catheter opening.

3. The appliance according to claim 2, wherein the sealing means is secured to the interior of the bag by heat sealing when the bag is formed.

4. The appliance according to claim 2 50 or 3, wherein the sealing means is provided with a normally closed catheter passage therethrough.

5. The appliance according to any of the preceding claims, wherein the sealing means 55 comprises a compressed sponge-like material.

6. A post-surgical irrigating appliance constructed and adapted to operate substantially as herein described with reference to the accompanying drawing. 60

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ROLLINSON,
Chartered Patent Agents,
Agents for the Applicants.

This drawing is a reproduction of
the Original on a reduced scale.

